

## REPORT ON OIL ENGINE MACHINERY.

No. 506

Date of writing Report *28-11-38* When handed in at Local Office *18-8-1939* Port of *Sheffield*  
No. in Survey held at *Loughborough* Date, First Survey *28-11-38* Last Survey *14-8-1939*  
Reg. Book. *7/6* Number of Visits *16*  
on the *Single* Screw vessel *Fleming & Ferguson 550 Abercraig* Tons *Gross* ☒  
*Triple* *Net* ☒  
Built at *Paisley* By whom built *Fleming & Ferguson Ltd.* Yard No. *550* When built *1939*  
Engines made at *Loughborough* By whom made *Brush Electrical Engineering Co. Ltd.* Engines No. *259* When made *1939*  
Donkey Boilers made at *✓* By whom made *✓* Boiler No. *✓* When made *✓*  
Brake Horse Power *750* Owners *Gundee Harbour Trust* Port belonging to *✓*  
Nom. Horse Power as per Rule *147* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*  
Trade for which vessel is intended *Ferry Service*

IL ENGINES, &c. Type of Engines *Twin, Brush V15-A-V15* 2 or 4 stroke cycle *Yes* Single *✓* acting *Yes*  
Maximum pressure in cylinders *750 lb/sq. in.* Diameter of cylinders *9 3/4"* Length of stroke *16 1/2"* No. of cylinders *8 each eng.* No. of cranks *4 per eng.*  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *15 5/8"* Is there a bearing between each crank *Yes*  
Revolutions per minute *440* Flywheel dia. *4'-8"* Weight *1 1/2 TON.* Means of ignition *Compression* Kind of fuel used *Siod oil*  
Crank Shaft, dia. of journals *as per Rule* ☒ *as fitted* *5 1/2"* Crank pin dia. *6 3/4"* Crank Webs *Mid. length breadth* *9 1/4"* Thickness parallel to axis *✓*  
*as fitted* *6 3/4"* *Mid. length thickness* *3 3/4"* *shrunk* Thickness around eyehole *✓*  
Flywheel Shaft, diameter *as per Rule* ☒ *as fitted* *3* Intermediate Shafts, diameter *as per Rule* ☒ *as fitted* *✓* Thrust Shaft, diameter at collars *as per Rule* ☒ *as fitted* *✓*  
Tube Shaft, diameter *as per Rule* ☒ *as fitted* *✓* Screw Shaft, diameter *as per Rule* ☒ *as fitted* *6"* Is the tube *✓* screw *✓* shaft fitted with a continuous liner *✓*  
Bronze Liners, thickness in way of bushes *as per Rule* ☒ *as fitted* *✓* Thickness between bushes *as per rule* ☒ *as fitted* *✓* Is the after end of the liner made watertight in the  
propeller boss *✓* If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *✓*  
If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *✓*  
If two liners are fitted, is the shaft lapped or protected between the liners *✓* Is an approved Oil Gland or other appliance fitted at the after end of the tube *✓*  
Shaft *✓* If so, state type *✓* Length of Bearing in Stern Bush next to and supporting propeller *✓*  
Propeller, dia. *✓* Pitch *✓* No. of blades *✓* Material *✓* whether Moveable *✓* Total Developed Surface *✓* sq. feet *✓*  
Method of reversing Engines *None* Is a governor or other arrangement fitted to prevent racing of the engine when detached *Yes* Means of lubrication *✓*  
Forced feed *✓* Thickness of cylinder liners *1"* Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers water cooled or lagged with  
non-conducting material *✓* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *✓*  
Cooling Water Pumps, No. *✓* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *✓*  
What special arrangements are made for dealing with cooling water if discharged into bilges *✓*  
Bilge Pumps worked from the Main Engines, No. *✓* Diameter *✓* Stroke *✓* Can one be overhauled while the other is at work *✓*  
Pumps connected to the Main Bilge Line *No. and Size* *✓* *How driven* *✓*  
Ballast Pumps, No. and size *✓* Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *✓*  
Are two independent means arranged for circulating water through the Oil Cooler *✓* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
Pumps, No. and size:—In Machinery Spaces *✓* In Pump Room *✓*  
Holds, &c. *✓*  
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *✓*  
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *✓* Are the Bilge Suctions in the Machinery Spaces *✓*  
Are they fitted with Valves or Cocks *✓*  
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates *✓* Are the Overboard Discharges above or below the deep water line *✓*  
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel *✓* Are the Blow Off Cocks fitted with a spigot and brass covering plate *✓*  
What pipes pass through the bunkers *✓* How are they protected *✓*  
What pipes pass through the deep tanks *✓* Have they been tested as per Rule *✓*  
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *✓*  
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one  
apartment to another *✓* Is the Shaft Tunnel watertight *✓* Is it fitted with a watertight door *✓* worked from *✓*  
If on a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *✓*  
Main Air Compressors, No. *✓* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*  
Auxiliary Air Compressors, No. *✓* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*  
Small Auxiliary Air Compressors, No. *✓* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*  
Serving Air Pumps, No. *✓* Diameter *✓* Stroke *✓* Driven by *✓*  
Auxiliary Engines crank shafts, diameter *as per Rule* ☒ *as fitted* *4 1/2"* pins *5 1/2"* journals *No.:* *2*  
*Position* *✓*

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *✓*  
Are the internal surfaces of the receivers be examined and cleaned *✓* Is a drain fitted at the lowest part of each receiver *✓*  
High Pressure Air Receivers, No. *✓* Cubic capacity of each *✓* Internal diameter *✓* thickness *✓*  
Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *by Rules* *Actual* *✓*  
Starting Air Receivers, No. *✓* Total cubic capacity *✓* Internal diameter *✓* thickness *✓*  
Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *by Rules* *Actual* *✓*



IS A DONKEY BOILER FITTED? ☒If so, is a report now forwarded? ☒Is the donkey boiler intended to be used for domestic purposes only ☒PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval) ☒

Receivers

No.

Separate Tanks

No.

Donkey Boilers

No.

General Pumping Arrangements

No.

Oil Fuel Burning Arrangements

No.

## SPARE GEAR.

Has the spare gear required by the Rules been supplied

None specified by Rules.

State the principal additional spare gear supplied

The foregoing is a correct description.

per pro. The British Electrical Engineering Co. Ltd

Chief Designer, Diesel Department.

Enamum. Flywheel is 349" dia &amp; weigh 1 1/2 tons

Dates of Survey while building

During progress of work in shops --  
During erection on board vessel --  
Total No. of visits

From 28/4/38 -- 14.8.39.

Dates of Examination of principal parts—Cylinders 24.4.39 6.4.39 13.4.39 6.4.39 Pistons 9.6.39 15.6.39 Rods Connecting rods 14.6.39 15.6.39

Crank shaft 9.6.39 15.6.39 Flywheel shaft Thrust shaft Intermediate shafts Tube shaft

Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions 8.6.39 14.6.39

Crank shaft, Material O.H. Ingot Steel Identification Mark 9036 9112 Flywheel shaft, Material Identification Mark

Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks

Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

Is the flash point of the oil to be used over 150° F. YES. A.W.K. CRANKSHAFTS. 3108, 3109. A.S. 11-5-39. 19-6-39.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

If so, have the requirements of the Rules been complied with

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with

Is this machinery duplicate of a previous case No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery described above has been constructed under Special Survey, & in accordance with Rule requirements. It agrees with the approved plans, shop trials have been witnessed with satisfactory results & in my opinion the machinery is eligible for classification upon being satisfactorily installed in the vessel for which it is intended.

For identification the engines have been marked on their crankcases:

## STARBOARD ENGINE:-

## PORT ENGINE.

## AUXILIARY ENGINES.

LLOYD'S 260

LLOYD'S 259.

LLOYD'S 258.

LLOYD'S 257.

9-6-39 W.K.

15-6-39 W.K.

14-8-39 W.K.

20-7-39 W.K.

The amount of Entry Fee £

Special £44

Donkey Boiler Fee £

Travelling Expenses (if any) £

When applied for,

19

When received,

5/12/39

Committee's Minute

GLASGOW 31 OCT 1939

Assigned

SEE ACCOMPANYING MACHINERY REPORT.

Engine Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register Foundation